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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,677	05/04/2006	Spendim Dalipi	P18691-US1	4560
27045	7590	11/26/2007		
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024			EXAMINER DO, CHAT C	
			ART UNIT	PAPER NUMBER
			2193	
			MAIL DATE	DELIVERY MODE
			11/26/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/595,677

Applicant(s)

DALIPI, SPENDIM

Examiner

Chat C. Do

Art Unit

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2006 and 09 June 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 25-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 06/09/06; 05/04/06.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Objections***

1. Claims 37-42 are objected to because of the following informalities:

Re claims 37-42, the applicant is reminded that these claims have same context despite very slightly wording compare with claims 31-36. The applicant is needed to explain the difference of two sets of claims.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 27-30, 33-36, 39-42, and 45-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 27, the limitation “the step of calculating a refined filter coefficient estimate...” lacks of antecedence basis since the step of calculating a refined filter coefficient has not previously mentioned in the claim. For the examination purposes, the examiner considers the step of calculating a refined filter coefficient as the step of calculating the filter coefficient that is used in the FIR filter. Further, it is unclear how the calculation of refined filter coefficients are related to the precedence claims since the

precedence claims utilize the LUTs for generating coefficients. Claims 28-30, 33-36, 39-42, and 45-48 have the similar rejection as above.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 25, 31, 37, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Cavers (U.S. 5,049,832).

Re claim 25, Cavers discloses in Figures 2 and 5 a training method for a power amplifier pre-distorter formed by a Finite Impulse Response (FIR) filter structure comprising an individual look-up table for each filter tap, each look-up table representing a discretized polynomial in a variable representing input signal amplitude, and means for selecting, from each filter tap look-up table, a filter coefficient that depends on the amplitude of a corresponding complex signal value to be multiplied by the filter tap (e.g. general concept is seen in Figures 2 and 5; abstract), training method comprising the steps of: storing measured unamplified input signal samples and corresponding power amplifier output signal feedback samples (e.g. Figures 2 and 5 by the delay element and phase rotation); and, determining look-up table filter coefficients (e.g. output of LUT in Figure 5) for each filter tap by separate independent iterative procedures using stored samples (e.g. by the adapted algorithm in the Figures).

Re claim 31, it has similar limitations cited in claim 25. Thus, claim 31 is also rejected under the same rationale as cited in the rejection of rejected claim 25.

Re claim 37, it has similar limitations cited in claim 25. Thus, claim 37 is also rejected under the same rationale as cited in the rejection of rejected claim 25.

Re claim 43, it has similar limitations cited in claim 25. Thus, claim 43 is also rejected under the same rationale as cited in the rejection of rejected claim 25.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 26, 32, 38, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cavers (U.S. 5,049,832) in view of Mashhour (U.S. 6,756,845).

Re claim 26, Cavers fails to disclose in Figures 2 and 5 iterative procedures are least mean square based. However, Mashhour discloses in Figure 6 the iterative procedures are least mean square based (e.g. col. 4 lines 18-25). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention is made to add the iterative procedures are least mean square based as seen in Mashhour's invention into Cavers' invention because it would enable to quickly adapt to produce the desired result (e.g. col. 2 lines 15-27).

Art Unit: 2193

Re claim 32, it has similar limitations cited in claim 26. Thus, claim 32 is also rejected under the same rationale as cited in the rejection of rejected claim 26.

Re claim 38, it has similar limitations cited in claim 26. Thus, claim 38 is also rejected under the same rationale as cited in the rejection of rejected claim 26.

Re claim 44, it has similar limitations cited in claim 26. Thus, claim 44 is also rejected under the same rationale as cited in the rejection of rejected claim 26.

### ***Allowable Subject Matter***

6. Claims 27-30, 33-36, 39-42, and 45-48, would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. U.S. Patent No. 4,887,306 to Hwang et al. disclose an adaptive temporal filter for ultrasound imaging system.
- b. U.S. Patent No. 6,362,701 to Brombaugh et al. disclose a digital communications modulator having an interpolator upstream of a linearizer and method therefor.
- c. U.S. Patent No. 5,586,068 to Rakib discloses an adaptive electronic filter.
- d. U.S. Patent No. 5,742,642 to Fertner discloses a signal processing method and apparatus for reducing equalizer error.

Art Unit: 2193

- e. U.S. Patent No. 5,923,712 to Leyendecker et al. disclose a method and apparatus for linear transmission by direct inverse modeling.
- f. U.S. Patent No. 6,591,282 to Sonu discloses an apparatus and method for a DC-insensitive FIR filter for optical PRML channel.
- g. U.S. Patent No. 5,568,411 to Batruni discloses a method and apparatus for using polarity-coincidence correlators in LMS adaptive filters.
- h. U.S. Patent No. 7,120,656 to Lam et al. disclose a movable tap finite impulse response filter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chat C. Do whose telephone number is (571) 272-3721. The examiner can normally be reached on M => F from 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chat C. Do  
Examiner  
Art Unit 2193



Application/Control Number: 10/595,677

Page 7

Art Unit: 2193

November 20, 2007